

Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A computer-implemented method for ~~automatically~~ testing ~~audio channels of an audio device~~ a computer sound card, comprising:
~~generating a first digital format tone at a synthesizer associated with an audio sound card;~~
utilizing a wave table synthesizer of the computer sound card to play a pre-produced digital tone from a sample stored in a memory of the computer sound card;
~~converting the first digital format pre-produced digital tone to an analog format tone;~~
~~playing~~ passing the analog format tone to a mixer of the ~~audio~~ computer sound card;
after the analog format tone is received at the mixer, looping the analog format tone through an internal loopback mechanism of the ~~audio~~ computer sound card to a recording audio channel of the ~~audio~~ computer sound card;
~~converting the analog format tone to a second digital format tone;~~
~~recording the second digital format tone;~~
~~comparing the second digital format tone to the first digital format pre-produced digital tone; and~~
if the second digital format tone is substantially similar to the ~~first digital format pre-produced digital~~ tone, designating the audio sound card as passing an audio test.

2. (Currently Amended) The computer-implemented method of Claim 1, ~~whereby~~ wherein if the second digital format tone is substantially similar to the first digital format tone, designating the recording audio channel of the audio sound card as passing an audio test.

3-7. (Canceled)

8. (Currently Amended) The computer-implemented method of Claim 1, further comprising after converting the analog format tone to the second digital format tone and recording the second digital format tone, converting the second digital format tone from a time domain to a frequency domain.

9. (Currently Amended) The computer-implemented method of Claim 8, ~~whereby~~ wherein converting the second digital format tone from a time domain to a frequency domain ~~includes~~ comprises converting the second digital format tone from a time domain to a frequency domain via a Fast Fourier Transformation (FFT).

10. (Currently Amended) The computer-implemented method of Claim 8, further comprising comparing a frequency of the second digital format tone with a known frequency of the ~~first digital format~~ pre-produced digital tone.

11. (Currently Amended) The computer-implemented method of Claim 10, ~~whereby~~ wherein the second digital format tone is substantially similar to the ~~first digital format~~ pre-produced digital tone if the frequency of the second digital format tone is substantially the same as the known frequency of the ~~first digital format~~ pre-produced digital tone.

12. (Currently Amended) The computer-implemented method of Claim 8, further comprising comparing a volume intensity of the second digital format tone with a known volume intensity of the ~~first digital format~~ pre-produced digital tone.

13. (Currently Amended) The computer-implemented method of Claim 12, ~~whereby~~ wherein the second digital format tone is substantially similar to the ~~first digital format~~ pre-produced digital tone if the volume intensity of the second digital format tone is substantially the same as the known volume intensity of the ~~first digital format~~ pre-produced digital tone.

14. (Currently Amended) The computer-implemented method of Claim 8, after converting the second digital format tone from a time domain to a frequency domain, further comprising:

calculating a DC offset value for the second digital format tone;

comparing the calculated DC offset value to a known acceptable DC offset value to determine whether an unacceptable level of DC offset is produced when the ~~first digital format~~ pre-produced digital tone is converted to the analog format tone and is looped through the internal loopback mechanism to the recording audio channel; and

if the calculated DC offset value is unacceptable, designating the recording audio channel as failing the audio test.

15-18. (Canceled)

19. (Currently Amended) A computer-implemented method for ~~automatically~~ testing a record function associated with ~~an audio channel of an audio device~~ a computer sound card across varying frequencies, comprising:

~~generating a first digital format tone at a first frequency at a synthesizer associated with an audio sound card;~~

utilizing a wave table synthesizer of the computer sound card to play a pre-produced digital tone from a first sample of a first frequency stored in a memory of the computer sound card;

~~converting the pre-produced digital tone in digital format to an analog format tone;~~

~~playing~~ passing the analog format tone to a mixer of the computer sound card;

after the analog format tone is received at the mixer, looping the analog format tone through an internal loopback mechanism of the ~~audio~~ computer sound card to a recording audio channel of the computer sound card;

converting the analog format tone to a second digital format tone;

recording the second digital format tone;

converting the recorded second digital format tone from a time domain to a frequency domain via a Fast Fourier Transformation (FFT);

comparing a frequency of the recorded second digital format tone with the first frequency; and

if the frequency of the recorded second digital format tone is substantially the same as the first frequency, designating the audio channel as passing a record test at a known frequency.

20. (Currently Amended) The computer-implemented method of Claim 19, further comprising repeating the steps of Claim 19 ~~whereby, wherein~~ wherein the ~~first digital format pre-produced digital tone is generated at~~ played from a second sample of a second frequency stored in a memory of the computer sound card in order to test recording the analog format tone over the recording audio channel at varying frequencies.

21. (New) A system for testing a computer sound card in a computer, the system comprising:

a computer sound card comprising a mixer, a recording channel, a wave table synthesizer, and a memory storing a sample of a pre-produced digital tone at a known frequency;

a processor; and

a system memory operatively coupled to the processor and containing computer-readable instructions that, when executed by the processor, cause the processor to

utilize the wave table synthesizer to play the pre-produced digital tone from the sample,

convert the pre-produced digital tone to an analog format tone,

pass the analog format tone to the mixer,

loop the analog format tone through an internal loopback mechanism of the mixer to the recording channel,

convert the analog format tone to a second digital format tone,

convert the second digital format tone from a time domain to a frequency domain via a fast Fourier transformation,

determine whether a frequency of the second digital format tone is substantially the same as the known frequency of the pre-produced digital tone, and

upon determining that the frequency of the second digital format tone is substantially the same as the known frequency, designate the computer sound card as passing an audio test.

22. (New) The system of Claim 21, wherein the system memory contains further computer-readable instructions that cause the processor to:

calculate a DC offset value for the second digital format tone;

determine whether the calculated DC offset value is greater than an acceptable DC offset value; and

upon determining that the calculated DC offset value is greater than the acceptable DC offset value, designate the computer sound card as failing the audio test.